GEORGIA INSTITUTE OF TECHNOLOGY

ENGINEERING EXPERIMENT STATION

no action

PROJECT INITIATION

Date: July 28, 1975

Project Title: Improving Substate Government Productivity Through Technology

Project No.: B-449

Project Director: R. E. Collier

Sponsor: Georgia Community Continuing Education Service; Athens, Georgia 30602

Agreement Period: From June 9, 1975 Until May 31, 1976

Type Agreement: Letter dated 6/9/75 (Sponsor Proposal No. 75-008-013)

Amount: $19,350* *Includes $12,900 Federal Funds and $6,450 EES Matching Funds.

Reports Required:

As necessary

Sponsor Contact Person:

Mr. Bradley C. Courtenay
Training Coordinator
Georgia Community Continuing Education Service
Center for Continuing Education
University of Georgia
Athens, Georgia 30602
Phone: (404) 542-5382

Assigned to: Industrial Development Division

COPIES TO:

Project Director
Director, EES
Director, ORA/GTRI
Assistant Director
Division Chief
EES Accounting
Patent Coordinator

EES Supply Services
Photographic Laboratory
Security—Reports—Property Office
General Office Services
Library, Technical Reports Section
Office of Computing Services
Project File
Other Sue Corbin; Bonnee Wattlaufer

RA-3 (3-75)

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION

SPONSORED PROJECT TERMINATION

Date: August 30, 1976

Project Title: "Improving Substate Government Productivity Through Technology"

Project No: B-449

Project Director: R. E. Collier

Sponsor: Georgia Community Continuing Education Service; Athens, Georgia

Effective Termination Date: 5/31/76 (Grant Expiration)

Clearance of Accounting Charges: 5/31/76

Grant/Contract Closeout Actions Remaining:

- X Final Invoice ~~and Closing Documents~~
- _ Final Fiscal Report
- _ Final Report of Inventions
- _ Govt. Property Inventory & Related Certificate
- _ Classified Material Certificate
- _ Other _____

Assigned to: Economic Development Laboratory (School/Laboratory)

COPIES TO:

- Project Director
- Division Chief (EES)
- School/Laboratory Director
- Dean/Director—EES
- Accounting Office
- Procurement Office
- Security Coordinator (OCA) ✓
- Reports Coordinator (OCA)
- Library, Technical Reports Section
- Office of Computing Services
- Director, Physical Plant
- EES Information Office
- Project File (OCA)
- Project Code (GTRI)
- Other _____

CA—4 (3/76)

Revised 12/19/72

B-449

COMPLETION REPORT
TITLE I (HEA) PROJECT ACTIVITY PROJECT FORM

1. Project Title:
Providing A Greater Understanding of Community Development Through Effective Communications & Grass Roots Training (75-008-013)

2. Location of Project:

Athens, Atlanta, Camilla, Carrollton, Cordele, Dahlonega, Eastman, Elberton, Griffin, Jasper, LaGrange, Milledgeville, Moultrie, and Waycross

3. Primary Institution of Higher Education:

Georgia Institute of Technology

4. Cooperating Institutions of Higher Education:

North Georgia College

5. Project Director (Name, Title and Address)

Jerry L. Lewis, Project Coordinator
Associate Director
Economic Development Laboratory
Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia 30332

6. Identify the Community Problem

I. Categorize the project in terms of problem area. (Check one)

___	Government	___	Crime/Law Enforcement
X	Housing	___	Health
___	Poverty	X	Economic Development
___	Transportation	___	Human Relations
___	Environmental Quality	___	Personal Development
___	Youth Opportunities	___	Education/School Systems
___	Recreation	X	Community Development
X	Employment	X	Land Use
		___	Other

II. Describe the community problem. The description need not be lengthy but should be specific and clearly stated.

See descriptions of various community problems in individual activity reports.

7. Describe the Specific Objectives of the Project:

The relationship of the objectives to the problem must be shown and the achievement of these objectives must be measurable.

See descriptions of various objectives in individual activity reports.

8. Project Operations

I. What was the primary type of activity? (Check one)

___ Course
___ Conference
_X_ Workshop/Seminar
___ Research
___ Technical Assistance
___ Counseling (Personal)
___ Mass Media
___ Radio
___ Television
___ Other (specify)
_X_ Information Dissemination (i.e. publications, pamphlets, manuals)
___ Other (specify)

II. Describe the project content, method, and materials employed, the personnel involved, and where applicable, the frequency of duration of sessions.

Each activity differed in terms of content, method, and materials employed, the personnel involved, and the frequency and duration of sessions. See individual activity reports.

9. Project Accomplishments

A. Evaluation

I. Discuss the nature and the findings of the project evaluation. Include an assessment of the project's success in meeting its specific objectives (see #7). In addition, comment on what you see as the reasons for the success or failure of the project. Did the project reach the anticipated target group? Was the level of participation as high as was projected? What outcome is most worthy of dissemination to other states and institutions of higher education?

Each activity was generally successful in meeting its specific objectives. See individual activity reports for nature and findings of the project evaluation.

II. Will the program itself continue beyond this period of Title I funding? If so, under what sponsorship or support? (Check one)

X	Continued under Title I	___	Accomplished purpose, no further plans
X	Continued with other Federal funding	___	Unsuccessful, no further funding
___	Continued with non-Federal funds	X	Other (specify)

(See activity report on "Improved Government Productivity through the Application of Technology," "Increasing Civic Understanding of Effective Community Economic Development," and "Land Use Development Management.")

B. Relative to Institution(s) of Higher Education

Indicate the impact of the project upon on-going program(s) of participating colleges and universities. Have changes occurred, or are they anticipated, in the organization, curriculum, budget, community service program, or other aspects of the institution(s)? Describe any planned or unexpected "spin-offs" involving additional funds or activities generated:

Each activity had impact on the primary iinstitution of higher education, and one activity had significant impact on the participating institution. See individual activity reports for details.

C. Relative to the Community

Specify the extent and the nature of the involvement in the project of community leaders, citizens, public and private agencies, and state and local government. Were they, for example, involved in the initiation of the proposal and/or the planning and development of the project? Have any new community agencies, organizations or groups been established as a result of this project? Has the community service capability of existing agencies and organizations been increased? If so, please describe:

Community leaders, citizens, public and private agencies, and state and local governments were involved to varying degrees in each of the five activities involved. See individual activity reports for details.

10. Geographic area served by the Project (Check one)

___	Urban	___	Metropolitan	___	Suburban
X	Rural	X	Statewide	X	Other (specify) Multicounty areas

11. Prior History of the Project (Check one)

X	New Report	___	Expansion or improvement of a non-CSCE project
X	Continuation of CSCE Project		
X	Revision of CSCE Project	___	Other (specify)

12. Faculty Involvement (List the faculty members involved in the project, the nature of their activity, their academic discipline,and the percentage of their time spent on the project.)

Faculty	Activity	Discipline	% of Time
Collier, R. E.	Director/Instructor	Education and training	60/20
Koos, P. D.	Director/Instructor	Special projects and planning	40/70/6
Kutas, R. B.	Instructor	Public administration	10/10
Howard, W. C.	Director/Instructor	Human resources	19/3
Lewis, J. L.	Consultant	Manpower resources	2
Lodge, D. E.	Director/Instructor	Housing market specialist	8
Clarke, F.	Instructor	Architecture	3
Dodson, W. G.	Director/Instructor	Urban planning	10
Cassell, R. B.	Instructor	Economic development	1
Powell, K.	Instructor	Economic development	1
Pearce, J.	Workshop director	Economics	4
Hodges, J. F.	Instructor	Economics	2
Berg, E. O.	Instructor	Economic development	3

13. Student Involvement (If applicable, indicate the nature of student involvement in the project as well as the number of students engaged in each activity.)

A. Instructors
B. Interns
C. Consultants (Tech. Assistance)
D. Researchers/Data Collectors
E. Other (specify in each instance)

Activity	No. of Students
Not Applicable	

14. Demographic Data

Demographic data on all actual participants should be collected and reported for each project. The data should be summarized in terms of sex, age, education and occupation. In addition, a brief narrative of the general characteristics of the participants should be included (i.e. were they city councilmen, upper level managers, housewives, etc? Were they the group for whom the project was intended?)

I. Demographic Summary:

	Males 214	Females 27
A. Age		
Under 21:	0	0
21-35:	70	11
36-55:	99	15
Over 55:	45	1
B. Educational Level		
Elementary:	1	0
Junior High School:	1	0
High School:	33	7
College below baccalaureate:	14	1
Baccalaureate:	89	7
Graduate or Professional:	76	12
C. Occupational Classification		
Professional:	112	13
Semi-Professional:	42	3
Skilled:	30	4
Semi-Skilled:	17	4
Unskilled:	5	2
Other (specify): bankers, businessmen, retired	8	1

D. Number of Participants by Ethnic Minority Served:

a. American Indians	
b. American Orientals	
c. American Negroes	8
d. Mexican Americans	
e. Cubans	
f. Puerto Ricans	

II. Narrative Description:

See narrative description of participants in individual activity reports.

15. Major Evaluation Procedure:

X	a.	Participant reactions
	b.	Administration of pre and post tests to participants
X	c.	Staff appraisal of changed group practices
X	d.	Other (specify) Letters from APDC Directors and others; development of student projects.

16. Project Materials [Describe the materials produced for and by the project (i.e. curriculum materials, films, etc.) and indicate whether copies are available for dissemination.]

See individual activity reports.

17. Express your judgment on the relationship of this project to the overall State program of Community Service and Continuing Education. (Title I, HEA)

See individual activity reports.

COMPLETION REPORT
TITLE I (HEA) PROJECT ACTIVITY

1. Project Title:

A program to furnish local elected officials, public administrators and and citizens of special interest groups information and assistance that will lead to improved government productivity through the application of technology.

2. Location of Project:

Atlanta	Eastman
Waycross	Camilla
	Milledgville

3. Primary Institution of Higher Education:

Georgia Institute of Technology

4. Cooperating Institutions of Higher Education:

None

5. Project Director (Name, Title and Address)

Robert E. Collier, Head
Education and Training Branch
Economic Development Laboratory
Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia 30332

6. Identify the Community Problem

I. Categorize the project in terms of problem area. (Check one)

____ Government	____ Crime/Law Enforcement
____ Housing	____ Health
____ Poverty	____ Economic Development
____ Transportation	____ Human Relations
____ Environmental Quality	____ Personal Development
____ Youth Opportunities	____ Education/School Systems
____ Recreation	XX Community Development
____ Employment	____ Land Use
	____ Other

II. Describe the project content, method, and materials employed, the personnel involved, and where applicable, the frequency of duration of sessions.

Generally, those involved in community and area planning and management do not need an engineering background to understand public technology and its implication in governmental operations. They do need to have a comprehensive understanding of technology applications to the process of government and be furnished necessary engineering and technical assistance in developing and implementing a systematic approach to the application of technology in the public sector. The program attempted to provide this"nontechnical" understanding through informational and instructional programs involving such subject matter as:

- o Concerns of municipal and county governments for improved productivity
- o Relationship of productivity in government to technology
- o Major technical problems in local government productivity
- o Current measurement practices in local government
- o The scope and nature of public technology
- o Opportunities for improving productivity in areas each APDC considered to be most relevant to its needs
- o Techniques for systematic technology "transfer"
- o Sources of technological assistance to local governments

In addition to the dissemination of knowledge concerning the application of public technology, the project was aimed at the institutionalization of processes within substate geographical areas through a "networking" system. The principal "change agents" involved were the professional staff members of the APDC staffs participating in the program. These staff members serve local governments through providing technical assistance. The program attempted to "network" the APDC staffs, their client organizations and outside sources of technical assistance such as the University System, the Georgia Bureau of Community Development and the Georgia Municipal Association.

During the preliminary program development phase, assistance and liaison was obtained through an "informal" advisory group consisting of Ms. Judith Mohr from the Institute of Government, University of Georgia, and Ms. Mary Lou Rothove of the Georgia Bureau of Community Development. These individuals assisted in the formulation of some of the basic program approaches and participated in the "Practitioner Workshop" conducted in Atlanta for APDC staff members.

The method of approach used in project accomplishment involved the establishment and maintenance of continuing liason with staff members of APDC's participating in the project. An initial orientation conference was held with six prospective APDC's to explain the program and what would be expected of participating APDC's. Initially, seven APDC's indicated a desire to participate in the program. On-site seminars and workshops were presented in four APDC locations.

II. Describe the community problem. The description need not be lengthy but should be specific and clearly stated.

Governments in many nonmetropolitan areas as well as in the major cities are suffering from two disabilities: (1) declining revenue bases and (2) inefficiencies in governmental operations. Only in recent years have many local governments begin to concern themselves with the quality of service and the effectiveness in serving citizens and the community as a whole. Esculating costs and urban problems suggest that productivity has been falling in many local governments. Attempts should be made to improve local government productivity. An approach being used to improve productivity in the public sector is technology.

7. Describe the Specific Objectives of the Project:

The relationship of the objectives to the problem must be shown and the achievement of these objectives must be measurable.

The program was developed and implemented in cooperation with the following area planning and development commissions (APDC's): Coastal Plain Area Planning and Development Commission, Heart of Georgia Area Planning and Development Commission, Southeast Georgia Area Planning and Development Commission, and Southwest Georgia Planning and Development Commission. This approach brought Georgia Tech management and engineering personnel familiar with public technology together with planning and development practitioners of the commission staffs who are performing the role of "change agent" in their geographic areas.

The general objectives of the program were to:

- o Increase civic understanding and acceptance of the role technology can play in improving productivity of local government at an affordable cost.
- o Develop a systematic approach at the municipal and county levels of government for the application of appropriate technology to municipal and county government operations.
- o Institutionalize a technical capability at the area planning and development commission level that can furnish leadership and support to local governments with respect to the application of technology to local government operations.
- o Improve communications between sources of technological assistance and local governments.

8. Project Operations

I. What was the primary type of activity. (Check one)

____ Course	____ Mass Media
____ Conference	____ Radio
__X__ Workshop/Seminar	____ Television
____ Research	____ Other (Specify)
____ Technical Assistance	____ Information Dissemination (i.e., publications, pamphlets, manuals)
____ Counseling (Personal)	____ Other (Specify)

An initial orientation conference was held in Macon followed by on-site visits to each participating APDC. At that time, program details were worked out and plans for seminars were made. Subsequently, a major two-day workshop was conducted at the Engineering Experiment Station. The agenda for this workshop is attached. In order to broaden interest, all APDC's in the state were invited to attend. A majority of the APDC's were represented at the workshop. Subsequently, workshop seminars were conducted at four APDC locations. A sample of the program presented is outlined in an attached brochure. These seminars workshops were of three to four hours in duration. During the entire period, technical assistance was furnished to APDC's on request.

9. Project Accomplishments.

A. Evaluation

I. Discuss the nature and the findings of the project evaluation. Include an assessment of the project's success in meeting its specific objectives (see #7). In addition, comment on what you see as the reasons for the success or failure of the project. Did the project reach the anticipated target group? Was the level of participation as high as was projected? What outcome is most worthy of dissemination to other states and institutions of higher education?

The EDL experience with the conduct of Title I HEA programs has shown that effective program evaluation is most difficult. It is believed that this situation occurs because most Title I projects are related to social problems which cannot be solved in the short run. It has also been observed that the cost of conducting an effective evaluation of these short-run programs can equal or exceed the cost of program development and implementation. Since the 1975 Title I programs have normal funding limitations, evaluation of the work has been limited to short-run effects with provision for long-range effects to be made through other means, if possible.

Evaluation of the work proposed in this project is related directly to the objectives established for the program. The following is a general evaluation of the program:

Objective I: Increase civic understanding and acceptance of the role technology can play in improving productivity in local government at an affordable cost.

A questionaire was developed and used to measure individual increase in understanding at the time immediately following the seminar workshop presentation. This evaluation was also utilized to make subsequent program changes where warranted. Generally, the program seemed to be well received and it is believed that it was effective in the case of those who attended (see attachment A). Although the program was designed for a wide variety of persons connected with or interested in local governmental operations, the core group to attend all meetings was the professional staff of the APDC's. Although some public administrators attended, the response from public elected officials was poor. It is believed that the low attendence record results in part from the lack of time available to such officials and the demand made on their time for other type educational and training programs. However, it is believed that by indoctrinating and training personnel who serve these public administrators and elected officials the idea of utilizing public technology to improve productivity in local government has been institutionalized in the four APDC's in which the program was conducted.

It is noted that well-financed, public technology programs sponsored by the National Science Foundation are now being conducted in a number of major cities. This Title I program was the first known program of this type to be tried in nonmetropolitan areas. It is believed that continuing effort will be needed if local governments are to operate as effectively and efficiently as they must in the future.

Objective 2: Develop a systematic approach at the municipal and county levels of government for the application of appropriate technology to municipal and county government operations.

The EDL staff worked with staff members of each APDC involved in the program in developing systematic approaches for the application of public technology. Instruction furnished the several APDC's is outlined in Attachment B. Although it is impossible to assess the effectiveness of this aspect of the program, correspondence contained in Attachment C indicates that the prospects are good for some degree of improvement.

Objective 3: Institutionalize a technical capability at the area planning and development commission level that can furnish leadership and support to local governments with respect to the application of technology to local government operations.

Based on the information contained in Attachment C, it is believed that program results have been institutionalized to a reasonable degree and that the participating APDC will continue the program.

B. Relative to Institutions(s) of Higher Education.

Indicate the impact of the project upon on-going program(s) of participating colleges and universities. Have changes occurred, or are they anticipated, in the organization, curriculum, budget, community service program, or other aspects of the institution(s)? Describe any planned or unexpected "spin-offs" involving additional funds or activities generated:

Subsequent to the time this project was initiated, the Engineering Experiment Station established a new laboratory to provide additional support to local governments and others in the field of technology. This unit, Productivity/Technology Applications Laboratory, will continue working in the area with which this project was concerned. In addition, an inter-university organization has been formed by the University of Georgia, Georgia State and Georgia Tech which will also work in this area. Thus, our organization, the Georgia Innovation Group has been funded by the National Science Foundation and is expected to be funded by the Department of Housing and Urban Development.

C. Relative to the Community.

Specify the extent and the nature of the involvement in the project of community leaders, citizens, public and private agencies, and state and local government. Were they, for example, involved in the initiation of the proposal and/or the planning and development of the project? Has the community service capability of existing agencies and organizations been increased? If so, please describe:

As indicated in the correspondence in Attachment C, APDC's are preparing themselves to give added technical assistance to local governments in the area

of public technology. The problem does not rest with the number of organizations on hand to serve public agencies. The problem is in providing systematic and adequate support to these governments. The APDC's are serving this purpose to a greater extent as time passes.

II. Will the program itself continue beyond this period of Title I funding? If so, under what sponsorship or support? (Check one)

_____ Continued under Title I
_____ Continued with other Federal funding
_____ Continued with non-Federal funds
_____ Accomplished purpose, no further plans
_____ Unsuccessful, no further funding
__X__ Other (specify) See I-B above

10. Geographic area served by the Project (Check one).

_____ Urban
_____ Metropolitan
_____ Suburban
_____ Rural
_____ Statewide
__X__ Other (specify) (4 APDC's)

11. Prior History of the Project (Check one).

__X__ New Report
_____ Continuation of CSCE Project
_____ Revision of CSCE Project
_____ Expansion or improvement of a non-CSCE project
_____ Other (specify)

12. Faculty Involvement (List the faculty members involved in the project, the nature of their activity, their academic discipline, and the percentage of their time spent on the project.)

Faculty	Activity	Discipline	% of Time
Collier, Robert E.	Project Director and Instructor	Research Scientist	60%
Koos, Phillip D., Jr.	Instructor	Research Scientist	40%
Kutas, Robert B.	Instructor	Research Scientist	10%

13. Student Involvement (If applicable, indicate the nature of student involvement in the project as well as the number of students engaged in each activity.)

A. Instructors
B. Interns
C. Consultants (Tech. Assistance)
D. Researchers/Data Collectors
E. Other (specify in each instance)

Activity	No. of Students
None	None

14. Demographic Data

Demographic data on all actual participants should be collected and reported for each project. The data should be summarized in terms of sex, age, education and occupation. In addition, a brief narrative of the general characteristics of the participants should be included (i.e. were they city councilmen, upper level managers, housewives, etc? Were they the group for whom the project was intended?)

I. Demographic Summary:

	Males	Females
A. Age		
Under 21		
21-35	20	1
36-55	22	1
Over 55	2	
B. Educational Level		
Elementary		
Junior High School		
High School	3	
College below baccalaureate		
Baccalaureate	26	1
Graduate or Professional	15	1
C. Occupational Classification		
Professional	40	2
Semi-Professional	4	
Skilled		
Semi-Skilled		
Unskilled		
Other (specify)		

D. Number of Participants by Ethnic Minority Served	
American Indians	
American Orientals	
American Negroes	4
Mexican Americans	
Cubans	
Puerto Ricans	

II. Narrative Description:

Program participants consisted in large part of professionals involved in public service activities. Professional staff members from substate APDC's included executive directors, planning directors, development specialists and governmental services persons. Others attending the workshop seminars included a city accountant, city administrative assistant, superintendent of schools, school administrator, University of Georgia cooperative extension agent, county administrator, and staff member of Georgia Department of Community Affairs.

15. Major Evaluation Procedure

___X___ Participant reactions

_____ Administration of pre- and post-tests to participants

_____ Staff appraisal of changed group practices

___X___ Other (Specify)
Letters from APDC directors and others

16. Project Materials. (Describe the materials produced for and by the project, i.e. curriculum materials, films, etc., and indicate whether copies are available for dissemination.)

Materials consisted of outlines, suggested invitational material visual aids, and xerox hand-out materials. At present, these materials are not available for further dissemination. See Attachment D.

17. Express your judgment on the relationship of this project to the overall State program of Community Service and Continuing Education. (Title I, HEA)

The concept for this program is an integral element of community services as outlined in the state's overall program. Governments in many nonmetropolitan areas as well as in the major cities are suffereing from two disabilities: (1) declining revenue bases, and (2) inefficiencies in governmental operations. Residents of these areas suffer from low and medium per capita family income, unemployment and underemployment, the lack of entrepreneurial opportunities, poor governmental services, and inadequately trained public administrators.

It is believed that the State Program of Community Service and Continuing Education (Title I, HEA) has recognized these relate problems and, consequently, have funds available for elements of the University system to lend assistance in coping with these problems. However, there is always more to be done than can be accomplished by one program and in one year.

Attachment A

WORKSHOP EVALUATION

IMPROVING SUBSTATE GOVERNMENT PRODUCTIVITY THROUGH TECHNOLOGY

WORKSHOP EVALUATION

Did the contents of the workshop meet your objectives in attending the workshop?

Yes 94.3% No 5.7% If no, why? _____

_____

Did you learn what you wanted to learn from the workshop?

Yes 90.2% No 9.8% If no, why? _____

_____

Do you feel that your participation in this workshop made you more qualified professionally?

To a great extent 43 Somehow 51.3 No 5.7

Did you find the workshop relevant to the situation in your area?

Very relevant 84 To some extent 12 No 4

Do you think that you could use the acquired knowledge in your agency and area?

Yes 98% No 2%

What was the level of the workshop?

Too theoretical 2 Good combination of theoretical and practical aspects 98%

Inadequate on the theory side - Inadequate on the practical side -

Entirely inadequate _____

Did you have sufficient time for a professional exchange of views?

a. with lecturers Yes 98% No 2%

b. with fellow participants Yes 98% No 2%

Did you benefit from the exchange?

a. with lecturers Yes 98% No 2%

b. with fellow participants Yes 98% No 2%

How would you rate the whole workshop, in general?

Excellent 61 Good 36 Poor 3%

Other comments;

_____

_____

_____

Attachment B

INTERORGANIZATION NETWORKING FOR TECHNOLOGY TRANSFER

Attachment B

INTERORGANIZATION NETWORKING FOR TECHNOLOGY TRANSFER

Purpose

The purpose of this paper is to describe the networking implications involved in the transfer of technology, the importance of interorganizational communication to the successful accomplishment of the objectives of the current program, and a method of approach for establishing and maintaining necessary interorganizational relationships required in the transfer of public technology.

Problem Area

The EDL work experience with municipal governments and planning and development agencies for nearly 20 years suggests that a significant problem involved in the delivery of social and economic opportunities to the people is the failure of personnel involved in or responsible for public administration to recognize and accept the concept of organizational interdependence, the need for collaboration in the planning and development process, and the absolute necessity of facilitating communication for the management of conflict involved in achieving goals. The EDL staff has observed that an essential prerequisite for the successful accomplishment of public development programs is good communication among agencies involved in the programs. However, it often seems that the matter of establishing good and continuing relationships and communication networks among public agencies and their clientele is left largely to chance and that little research-based knowledge is available to assist managers and administrators of development programs in design, establishment, and maintenance of adequate communication structures, processes, and procedures.

An Approach to Interorganizational Networking

Increasingly, administrators in the public sector and managers in the private sector of society find that rather than managing resources or managing a system, they are managing relationships, facilitating the exchange of information, and the development of understanding among diverse components which made up the community of interest. Increasingly, public and private institutions are being called upon to bridge the gaps which exist between these diverse com-

ponents, to forge new linkages, to construct and facilitate networks which make it possible for individuals and institutions to draw on each other for information, resources and expertise.[1]

As has previously been noted, economic development programs in Georgia, as well as in most states, are operated on a highly individualistic basis by organizational units with some duplication and little or no coordination or overall strategy. The United States does not have a comprehensive economic plan administered by a hierarcy of closely knit bureaucratic organizations. Rather the economy of the country is dominated by a "conglomeration" of public and private organizations.

The practice of building higher and stronger walls around institutions, both literally and figuratively, distracts from the capacity of the institution to respond and interact with other institutions to mutual advantage. Conversely, breaking down all boundaries that separate one institution from another (or one function from another) ultimately results in a flattening out of the total system and a loss of the very uniqueness and diversity which is necessary to feed that system. The solution lies not in an "either or" strategy but rather in a mode of behavior which makes it possible to retain the identity of the institution (and the people within it) while facilitating exchanges of information or transactions with others in the environment which provides it with the resources it needs in order to function. The key elements required in order to build positive linkages, in order to establish useful networks, include the following:

- An individual, a group, or an institution has to be clear about its own identity, its own uniqueness, before it can link successfully to others. This means that the development of interdependency starts with homogeneous groups. Every politician knows that he does not begin a campaign by organizing those who disagree with him. He starts with those he knows -- those who share some of his values and aspirations and are <u>clear</u> about that shared feeling. From this somewhat homogeneous group, he can begin to broaden the base of shared aspirations and expectations.
- Diversity within homogeneous groups provides a basis for linkages with others.

- The institution must interact with its environment. The life-force of an institution must in part be drawn from the environment. Thus, as homogeneous groups begin to encourage new interactions, as they begin to value diversity within themselves, they are then able to engage in and draw strength from new engagements within their environment.[2]

An essential element in interorganizational networking is the idea that separate, formal organizations can be conceptualized as a system of interlocking groups connected by individuals who occupy key positions of informal, dual membership in the interlocking organizations and serve as linking pins between two or more of these organizations. These key people who occupy positions may well be linked to each other through similar key people in other parts of the environment.

To the extent that this approach is correct, it suggests not only a relevant point of entry in analyzing organizational-systems relationships (the location of linking pins), but also implies that parts of the systems environment are not independent of each other as is commonly thought. Consequently, if an organization is to understand and deal with its environment, it must seek out and understand these interdependencies. In this connection, the linking pin approach to interorganizational networking must take "communication" into consideration.

Nature of Organizational Communication Networks

Within the overall scheme of management, processes like communication, decision making, and balance (control and regulation) are basic interactions carried out which sustain the life of the organization. Communication allows parts of the organization to "talk" with each other, it exchanges information with the outside world, and it provides a means of storing and retrieving information.

Communication channels and networks (or systems) furnish multiple communication linkages within organizations and provide for interorganizational action and relationships. A communication network should be considered as a system of decision centers connected by communication channels which include a feedback mechanism. The communication process involves the transmission of material from the sender to the target audience, its reception and comprehension, and its

reception or rejection. The communication model can be visualized in three elements.

- o Sources to generate information and receivers to assimilate it.
- o Vehicles to convey information -- symbols.
- o A channel to distribute information -- media.

Communication activities include the following:

- o Communications that provide data for the applications of strategy by decision makers.
- o Communications that initiate and establish programs that facilitate day-to-day adjustment and coordination of activities.
- o Communications that reinforce programs by motivating people to get the job done.
- o Communications that provide feedback information on the results of activities and improve the program evaluation effort.
- o Communications that involve nonformalized activities, including the "grapevine."

Networking Methodology

While a great deal of research-based information concerning intraorganizational communication is currently available and a great deal is known about interpersonal and public relations types of communication, little research-based knowledge relating to interorganizational networking and communication is available. It is essential that project methodology relating to networking be clearly delineated. Accordingly, the following factors should be considered in the design and development of a systematic approach for the transfer of public technology.

- o The identification of essential types of interorganizational activity associated with the mission, policy, and functions of the organization being studied.
- o The identification and categorization of generating and receiving sources (linking pins) involved in essential networks and communication activities.
- o The identification of communication vehicles, media, and regulation and balance mechanisms involved in essential network and communication activities.

- The synthesis of existing communication channels and networks, both formal and informal (in terms of linking pins).
- Analysis and evaluation of the effectiveness of selected existing networks.
- The identification of institutional, management, technological, and/or structural weaknesses in the functioning of existing networks.
- The identification of the need for additional networks or the modification or elimination of existing ones.
- Recommendation of measures to be undertaken to improve the functioning of networks within and among the organizations studied.
- Recommendation for general reorientation in organizational, administrative, and management systems applications that would improve the functioning of networks and related communication activities.

Attachment C

CORRESPONDENCE CONCERNING PROGRAM EVALUATION

SOUTHEAST GEORGIA
AREA PLANNING & DEVELOPMENT COMMISSION

CHAIRMAN
LISTON ELKINS

EXECUTIVE DIRECTOR
ED BODENHAMER

February 5, 1976

Mr. Philip D. Koos
Industrial Development Division
Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia, 30332

Dear Phil:

The two day seminar on Substate Government Productivity in Atlanta last Wednesday and Thursday was one of the most valuable programs I have attended in years. I congratulate you and Bob Collier and all the other participants on the fine job you did in presenting this seminar to us.

As I stated, we're ready for some help in our APDC. I'm staffing up to do just this sort of work and I'll be deeply appreciative of any help you all can give us.

With kindest personal regards and best wishes, I am

Sincerely

Ed Bodenhamer
Executive Director

jr

cc: Mr. Bob Collier

902 GROVE AVENUE • P.O. BOX 1276 WAYCROSS, GEORGIA 31501 • 912/283-3831

BOARD OF COMMISSIONERS
OF
COLQUITT COUNTY, GEORGIA
MOULTRIE, GEORGIA
31768

ILLY G. FALLIN, Chairman
Moultrie, Ga.
L. PERRY, JR. Vice Chairman
Moultrie, Ga. Route 6
)HN HENRY IVEY
Norman Park, Ga.
)E PARKER
Doerun, Ga.
ALTER D. NORMAN
Hartsfield, Ga. Route 1
AXBY CHAMBLISS, County Attorney
Moultrie, Ga.

SAM LOFTON
Colquitt County Administrator
COURTHOUSE
POST OFFICE BOX 517
TELEPHONE 912-985-6859

February 6, 1976

Mr. Bob Collier, Chief
Industrial Development Division
Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia 30332

Dear Bob:

I wanted to let you know how much I enjoyed your productivity seminar last week.

It seemed to me that everyone involved throughly enjoyed the meetings. I appreciate you and Phil asking me to participate.

If I understood you correctly you are in the process of selecting cities and counties for your energy program. I would like to suggest that you consider Colquitt as a possible pilot county. I will be happy to furnish you with any information on our operation.

Thank you again for inviting me to the seminar. I look forward to hearing from you soon.

Sincerely,

Sam Lofton
County Administrator

dc

APDC

HEART OF GEORGIA
planning & development commission
P.O. Box 667 — EASTMAN, GEORGIA 31023 — (912)374-4771

June 2, 1976

[illegible] Collier
[illegible]
[illegible] Institute of Technology
[illegible] th Avenue
[illegible], Georgia 30332

[illegible] Bob:

The session on improving local government efficiency and [illegible]ductivity through technology that you presented on April 28th [illegible] in Eastman was greatly appreciated by our staff.

[illegible]r local governments can benefit considerably from the [illegible] presented as there is much room for improvement in [illegible]ncy and productivity in our rural area.

We hope that you will continue to keep us informed on [illegible]st material and ideas on this subject as it pertains [illegible]r nine counties.

[illegible] regards.

Sincerely,

Davis Richey
Assistant Executive Director

[illegible] (1)

OCONEE AREA planning & development commission

JIM GENTRY
EXECUTIVE DIRECTOR

P.O. BOX 707 MILLEDGEVILLE, GA.
104 E. HANCOCK ST. 912-453-5327

June 11, 1976

Mr. Robert E. Collier
Economic Development Laboratory
Georgia Institute of Technology
Atlanta, Georgia 30332

Dear Bob:

The Oconee Commission extends its thanks to you, Phil Koos and Bob Kutas and the Economic Development Laboratory for initiating and conducting the two workshops in Milledgeville for the benefit of the Oconee APDC staff and interested local officials and citizens.

The two workshops designed to help improve government productivity through technology and to increase civic understanding of land use development management for greatest energy conservation and maximum productivity through use of developmental regulations were most informative to those attending. While most of the comments and issues that were made and discussed are not new to anyone, the present day application of governmental productivity, energy conservation, land use development controls and other items have to be given consideration due to prevailing economic and developmental conditions. Old and new concepts, ideas, and solutions must be utilized in light of dwindling natural resources and rising costs of goods and services.

Planners and planning organizations must keep abreast of what is going on as well as plan for what is going to go on. Therefore such workshops are valuable to planners and other local constituents because they focus on issues, both present and future. Solutions to satisfy most issues can be found. Implementation of these solutions depends on local government officials - their acceptance and actions.

The workshops were most informative, particularly in refreshing the staff of the sideline issues that are sometimes forgotten because an immediate crisis is not the issue of the day. It was evident that the EDL staff had done their homework and invested considerable time in preparing the workshops presentations. We were glad to learn of available assistance that can be obtained from Georgia Tech and other sources.

As in the past, the Oconee Commission will take advantage and participate in like workshops whenever possible. We also encourage the EDL staff to hold more workshops in the Oconee Area no matter what the subject.

Thanks again for the cooperative spirit and assistance that the EDL staff provides to the Commission.

Sincerely,

Benjamin T. Layton
Assistant Executive
Director for Planning

BTL:vh

SOUTHEAST GEORGIA
AREA PLANNING & DEVELOPMENT COMMISSION

CHAIRMAN
LISTON ELKINS

EXECUTIVE DIRECTOR
ED BODENHAMER

April 29, 1976

Robert E. Collier, Head
Economic Development Laboratory
Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia 30332

Dear Bob:

Thank you so much for coming down and meeting with our staff and presenting the workshop programs on land use and productivity.

As you know our Board has committed our technical assistance staff to an extensive work program for the coming fiscal year and a large portion of their efforts will be directed at improving and strenghtening management and productivity at all levels of local governmental operations. In order to maximize our efforts we intend to draw heavily on the experience and expertise of the Economic Development Laboratory.

The productivity workshop that Marvin Hurst and I attended in Atlanta, January 28, 29, was one of the most valuable programs I have attended in years. Your presentation in Waycross last month was equally well received by our staff.

Your continued support is essential to our success.

With kindest personal regards and best wishes, I am

Sincerely,

Ed Bodenhamer
Executive Director

cc: Hank Welch
Technical Assistance Division

902 GROVE AVENUE • P.O. BOX 1276 WAYCROSS, GEORGIA 31501 • 912/283-3831

ENGINEERING EXPERIMENT STATION
GEORGIA INSTITUTE OF TECHNOLOGY • ATLANTA, GEORGIA 30332

April 21, 1976

Mr. Delma F. Herrin, Chairman
Brantley County Board of Commissioners
Brantley County
Nahunta, Georgia 31553

Dear Mr. Herrin:

Recently, a Georgia Tech Engineering Experiment Station team involved in public technology conducted a training program for the staff of the Southeastern Area Planning and Development Commission which serves your area. The training program was designed to further the goal of improving substate governmental operations through technology. During the training program, we became aware of your interest in improvement programs that would be of assistance to local governments in the southeastern area.

I believe that it is generally recognized that governments in many nonmetropolitan areas as well as in the major cities are suffering from two disabilities; declining revenue bases and inefficiencies in governmental operations. Residents of these areas suffer from low per capita and medium family income, unemployment and underemployment and the lack of entrepreneural opportunities. We firmly believe that local and areawide development programs must address both the economic and governmental services problem areas. In this connection, we are aware that your planning and development commission is continuing to work in both of these problem areas.

It has been our general observation that the most pressing problem currently facing city and county officials involve the quality of public services. These problems tend to be closely related to the make up of the budget and involve equipment, manpower and public works. Esculating costs, coupled with declining revenues, make it essential that local governments become as efficient as possible. In most instances, small governmental units need outside assistance.

We have read your letter to the Department of Housing and Urban Development of March 31, 1976 and feel that your approach has considerable merit. We hope that HUD will give your proposal favorable consideration. Should your proposal be approved and funded, we would be very happy to furnish you such assistance as you would need from us. At the present time, we have good capability in the field of energy management and conservation and in the development and implementation of maintenance and utilization programs.

If we can be of further assistance, please let me know.

Sincerely,

Ross W. Hammond, Director
Economic Development Laboratory

net

SOUTHEAST GEORGIA
AREA PLANNING & DEVELOPMENT COMMISSION

CHAIRMAN
LISTON ELKINS

EXECUTIVE DIRECTOR
ED BOOENHAMER

April 19, 1976

Mr. Ross W. Hammond, Director
Economic Development Laboratory
Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia 30332

Dear Ross:

The Southeast Georgia APDC is preparing an Innovative Project Application to the Department of Housing and Urban Development in behalf of Brantley County which is the "Lead Agency" and the other seven counties comprising the Southeast Georgia APDC region. It is the intent of the participants to file an application in the area of Government Productivity Improvement.

In order to demonstrate to HUD that this project will include a broad base of support and expertise from state government departments and the Georgia academic institutions, the application is being structured to include the following agencies: the Economic Development Laboratory; the Georgia Department of Natural Resources; the Bureau of Community Affairs; and the Institute of Government.

We are hoping that the Economic Development Laboratory can help in the survey stage of this project by obtaining information regarding two subareas: Energy Conservation Program, and Maintenance and Utilization Program. The Laboratory has experts in both of these areas that can provide very valuable aid to our governments.

If you agree to help us in this undertaking, I would appreciate obtaining a letter from you endorsing this project and offering your help in accomplishing its objectives. The letter should be addressed to:

Mr. Delma F. Herrin, Chairman
Brantley County Board of Commissioners
Brantley County
Nahunta, Georgia 31553

In view of the tight deadline - April 26 - I would appreciate it if you sent the original letter directly to the Southeast Georgia APDC office for inclusion with the application.

In order to give you a better understanding of the project I am enclosing a copy of the "letter of intent" sent to HUD on March 31.

As you can realize, if successful, this project will mean a great deal to our cities and counties. We are all hoping that you will support us in this undertaking.

With kindest personal regards and best wishes, I am

Sincerely,

Ed Bodenhamer
Executive Director

bcr

Enclosure

BOARD OF COMMISSIONERS
BRANTLEY COUNTY
NAHUNTA, GEORGIA 31553
TELEPHONE 462-5256

LMA F. HERRIN, Chairman, Post No. 1
EL HERRIN, Post No. 2
CHARLTON LEE, Clerk, Post No. 3
BILLY LEE, Post No. 4
J. FULTON JACOBS, Post No. 5

March 31, 1976

The U. S. Department of
Housing and Urban Development
Office of Policy Development
and Research
Room 8162
Division of Community Development
451-7th Street, S. W.
Washington, D. C. 20410

ATTN: Innovative Projects Program

This is to notify you of the intent of the Brantley County, Georgia Board of Commissioners to file an application under the Government Productivity Improvement section of the FY 76 Innovative Projects Program. Brantley County will serve as the lead applicant of a consortium of eight rural Southeast Georgia counties. The other seven counties included in the consortium are Atkinson, Bacon, Charlton, Clinch, Coffee, Pierce and Ware. The proposed project will also benefit the seventeen incorporated municipalities located within the eight counties.

The proposed project will address one of the most critical needs of the twenty-five units of general local government who will participate; ways to cut costs of local government without reducing either the quantity or the quality of governmental services delivered to citizens. This is a particularly appropriate project for the instant applicants because of the unique characteristics of the area involved.

The area included within the eight applicant counties (all contiguous) is marked by an extremely high incidence of poverty (per capita income for the combined area in 1970 was $1,879, only 51% of U. S. per capita income of $3,678. Source: U. S. Census, 1970) low population density (97,771 persons resided in the 4,518 square mile area in 1970. The density of 21.64 per square mile was less than one-third of the density of 77.95 per square mile for the State of Georgia. Source: U. S. Census, 1970), generally hostile geographical and environmental features (much of the area is low-lying wetlands suitable primarily for pulpwood and timber production) and an inordinate concentration of employment in generally declining, low-wage industries such as agriculture, forestry, textiles, furniture and food and dairy

(29.6% of total employment in 1970 was in the named industry groups as compared to only 12.2% of total employment in the same industry groups for the entire United States. Source: U. S. Census, 1970).

The twenty-five units of general local government serve small populations ranging from 206 persons (City of Argyle in Clinch County) to 18,996 persons (City of Waycross in Ware County). The quality and quantity of services provided by the local governments has severely declined in the past five years because of several important factors including (1) diversion of local revenues to operate new programs in order to comply with a myriad of new federal and state laws and regulations which impose stringent requirements on local governments but do not generally provide revenues for implementation of the requirements (2) significant increases in the costs of labor and the costs of materials and supplies (up 35-50% in most areas) have greatly exceeded the increases in local tax revenues and the increases in federal and state financial aid, (3) primary dependence for local tax revenues on the property tax. Increases in the value of most property in the area (e.g. woodlands and farmlands) have been only minimal with a corresponding minimal increase in tax revenues. Property taxes for most jurisdictions are at or near the limit imposed by the state constitution which, along with the general poverty of the area, makes significant tax increases very improbable, (4) the small sizes and budgets of the local governments have made it difficult to take advantage of many modern, cost-saving ideas and methods and (5) the costs of delivering services have increased out of proportion to the population served because of the low population density.

It is hypothecated by the local governments involved that the only practical way to reverse the decline in services is to identify and implement means of more efficiently utilizing the revenues presently available since significant increases in revenues are very unlikely in the near future. To this end, five specific action programs which could lead to very significant cost savings without reducing services have been identified. These are (1) implementation of stringent energy conservation measures for governmental operations, (2) implementation of improved purchasing procedures to include joint bidding, common supply lists, common vendors, etc., (3) improved utilization of existing personnel through increased training and implementation of better personnel management procedures, (4) more efficient usage and scheduling of vehicles and equipment to include exploration of the possibility of joint utilization of expensive, special-purpose items and (5) better maintenance programs for vehicles, equipment and public buildings.

Though the local governments involved have been able to identify five action programs which could result in significant savings, none of the governments have personnel with the expertise to develop and implement the programs, nor do they have funds to employ personnel who possess the expertise required. Only through a joint program with outside financial assistance can the programs be implemented. That is the purpose of the project proposed herein.

The program will be carried out through a contract between the applicant governments and the Southeast Georgia Area Planning and Development Commission (an Area Planning Organization serving the eight counties). The APDC will employ properly qualified management specialists who will work closely with all the local governments to develop and implement the five action programs listed above. The project personnel will be heavily supported by existing staff of the APDC. In addition, services of the Economic Development Laboratory of the Georgia Institute of Technology, the Institute of Government and the Institute of Community and Area Development at the University of Georgia and the Georgia Bureau of Community Affairs will be utilized. Other consultants will be utilized as needed.

The project duration will be eighteen months. Estimated cost of the project is $101,529.

It is estimated that the project will result in annual savings of more than $500,000 without any reduction in quality or quantity of services. In addition, a further benefit will be a significant reduction in the consumption of energy, thus, materially aiding the national goal of energy conservation.

A copy of this letter is being sent to the Atlanta Area Office of HUD. A formal application will be submitted prior to April 28, 1976.

Sincerely,

Delma F. Herrin
Chairman

SOUTHEAST GEORGIA
AREA PLANNING & DEVELOPMENT COMMISSION

CHAIRMAN
LISTON ELKINS

EXECUTIVE DIRECTOR
ED BODENHAMER

March 30, 1976

MEMORANDUM

TO: Chief Elected Officials, SEGAPDC Cities and Counties
School District Superintendents

FROM: Ed Bodenhamer
Executive Director

SUBJECT: Area Workshops on Productivity and Land Use

The SEGAPDC and the Economic Development Laboratory of Georgia Tech will jointly sponsor two workshops during the month of April for local governmental leaders and public administrators in our area.

The Georgia Tech Engineering Experiment Station has put together a team to assist local governments and other public institutions to improve the efficiency of current operations through the application of known technologies. These programs are essentially a "how to" approach designed to be applied at the local level rather than a philosophical dicussion of problems. They have developed some very practical approaches to basic management problems which should prove beneficial to public administrators at all levels.

The workshops will be held in the Mirror Room of the Ware YMCA in Waycross (the old Ware Hotel) on the afternoons of the 13th and 14th of April, and will last approximately three hours each. (Enclosure)

Please complete and return the enclosed attendance card so that we may get an estimate of the number of participants.

We look forward to your attendance or representation at these sessions on two most timely subjects.

HW/dm

Enclosure

902 GROVE AVENUE • P.O. BOX 1276 WAYCROSS, GEORGIA 31501 • 912/283-3831

PRODUCTIVITY WORKSHOP

A Program to Improve Substate Government
Productivity through Technology.

1:00 - 1:30	Registration
1:30 - 1:40	Opening Remarks
1:40 - 2:10	Productivity (what, where, when, how)
2:10 - 2:40	Networking - the Concept and Reality
2:40 - 3:00	Changing Role and Rationale on Planning and Development--Some Views
3:00 - 3:15	Break
3:15 - 4:00	A Problem
4:00 - 4:20	Open Discussion
4:20 - 4:30	Evaluation

COASTAL PLAIN AREA PLANNING AND DEVELOPMENT COMMISSION

Box 1223
327 W. Savannah Ave.
Valdosta, Georgia 31601

Phone ~~XXX-XXXX~~ 247-3454/94

December 23, 1975

MEMBER COUNTIES

Ben Hill

Berrien

Brooks

Cook

Echols

Irwin

Lanier

Lowndes

Tift

Turner

Mr. Robert E. Collier
Industrial Development Division
Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia 30332

Dear Bob:

At our meeting in Macon on October 29, 1975, you asked that each of us return to our respective areas and talk with several of our city managers or local government officials concerning the problems they have in energy productivity-related services. I have talked with three city managers in the Coastal Plain area and would like to relay their thoughts to you.

Tom Muehlenbeck, city manager, Valdosta, Georgia - Mr. Muehlenbeck felt that his most urgent need in energy productivity-related problems was in the following areas: (1) fleet management - Mr. Muehlenbeck stated that he would like to have assistance in areas of vehicle operations, maintenance, modification and replacement. Also other types of assistance in improving the efficiency of his fleet management, servicing, vehicle routing and fuel allocation; (2) existing public buildings - Mr. Muehlenbeck would like to have an energy audit on these buildings; (3) types of street lights that would be economical and efficient for the City of Valdosta.

William Pierce, city manager, Adel, Georgia - Mr. Pierce stated that he had two main concerns: (1) study of electrical energy usage so that the city could better manage peak demands of total electrical output. He stated that basically the City of Adel has two peak periods of electrical usage, 4:30 p. m. and 11:30 a. m.; (2) fleet management - Mr. Pierce had similar thoughts to City Manager Tom Muehlenbeck and he stated that he too needed assistance in this area.

Webster Morgan, city manager, Tifton, Georgia - Mr. Morgan stated that his items of interest were: (1) garbage routes - He would like to have some assistance in planning and designing garbage routes so that the crew members would not be covering the same area. He also needed assistance in designing a police route; (2) building construction - He was interested in this area of assistance in finding the most economical public buildings available, such as the initial design consideration, low cost measures and moderate cost measures; (3) energy saving on sewage treatment plants - Mr. Morgan stated that this was a real problem in the City of Tifton and that any help in this area was definitely needed. He also said that he felt that there was a need for a workshop for the maintenance personnel employed by the various cities. He said that this is where the energy savings techniques and energy costs would be utilized. Also, he said a workshop for mechanics would be very useful since there are many ways that a mechanic could be taught to improve the energy saving modifications of vehicles.

Bob, I am looking forward, after the first of the year, to working with you on setting up some type of program beneficial to the ten county Coastal Plain area. Thank you for your interest in this commission, and I will be waiting to hear from you soon.

Sincerely,

James H. Rainwater, Jr., Director
Assistant Executive Director

JHR/pb

Southwest Georgia
PLANNING AND DEVELOPMENT COMMISSION
POST OFFICE BOX 346 · CAMILLA GEORGIA TEL. 336 5616

February 11, 1976

Mr. Phil Koos
Community Development Branch
Industrial Development Division
Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia 30332

Dear Phil:

As I indicated by phone the other day, Sam Lofton of Colquitt County has expressed an interest in the pilot projects relating to energy management and conservation. I believe he has written Bob Collier to that effect.

In addition, the City of Sylvester has expressed an interest in this project. Camilla has expressed a tentative interest as well as the Thomas County school system.

As the report, which we submitted indicates, we have stirred up some interest in the subject and established some lines of communications. We are going to have to respond with some effective and meaningful assistance and we certainly hope that your pilot programs can be stretched over as many communities in our area as possible.

We look forward to seeing you on the 18th.

Sincerely,

Wayne Williams
Research Specialist

EWW/ddj

P. S. We have not yet received the budgeting material. Perhaps it was lost in the mail.

P. S. In regard to the Thomas County School System, Mr. Cone, Superintendent, just called to express an extremely high level of interest in becoming involved in this project.

Attachment D

PROJECT MATERIALS

IMPROVING SUBSTATE GOVERNMENT PRODUCTIVITY THROUGH TECHNOLOGY

"PRACTITIONER WORKSHOP"

Engineering Experiment Station
Atlanta, Georgia

January 28-29, 1976

A TRAINING PROGRAM CONDUCTED UNDER THE AUSPICES OF

THE GEORGIA PRODUCTIVITY CENTER

IN COOPERATION WITH

COASTAL PLAIN AREA PLANNING AND DEVELOPMENT COMMISSION
HEART OF GEORGIA AREA PLANNING AND DEVELOPMENT COMMISSION
MIDDLE GEORGIA AREA PLANNING AND DEVELOPMENT COMMISSION
OCONEE AREA PLANNING AND DEVELOPMENT COMMISSION
SOUTHEAST GEORGIA AREA PLANNING AND DEVELOPMENT COMMISSION
SOUTHWEST GEORGIA AREA PLANNING AND DEVELOPMENT COMMISSION
PRODUCTIVITY/TECHNOLOGY APPLICATIONS LABORATORY, EES/GT
INSTITUTE OF COMMUNITY AND AREA DEVELOPMENT, UG
INSTITUTE OF GOVERNMENT, UG

SPONSORED BY

GEORGIA POST SECONDARY EDUCATION COMMISSION: STATE AGENCY
UNIVERSITY OF GEORGIA CENTER FOR CONTINUING EDUCATION: ADMINISTRATIVE UNIT
TITLE I, HIGHER EDUCATION ACT OF 1965

PROJECT MANAGED BY

Economic Development Laboratory
ENGINEERING EXPERIMENT STATION
Georgia Institute of Technology

WORKSHOP AGENDA

Wednesday
January 28, 1976

1:00 - 1:15	Workshop Introduction: Networking as a Means of Helping Nonmetropolitan Governments.	Collier
1:15 - 2:15	What Is Happening in Public Technology and Productivity? What Do We Mean by Public Technology and Productivity? Can Technology Be Used to Improve Productivity in the Nonmetropolitan Cities and Counties?	Kutas
2:15 - 2:30	Break	
2:30 - 3:30	Practical Methods and Techniques That Can Be Used "Now" in Providing Local Governmental Services at the Lowest Cost.	Grasser
3:30 - 4:00	Identifying Opportunities for Improving Productivity in Local Governments.	Kutas
4:00 - 4:30	Productivity and Technology as Related to Land Use and Development: Some Views.	Koos
4:30 - 4:45	Productivity and Technology: Energy Implications	Bonham

Thursday
January 29, 1976

9:00 - 9:30	Getting Ready for the Session.	Collier
9:30 - 10:00	Productivity Cautions!	Ms. Mohr
10:00 - 10:15	Networking with the Bureau of Community Affairs.	McGuinn
10:15 - 10:30	Break	
10:30 - 11:00	Productivity from the Managers' Perspective.	Panel of Managers
11:00 - 11:30	The APDC's Role in Public Technology and Productivity-Catalyst? Advisor? and/or Participant?	Round Table Discussion Chaired by an APDC Executive Director
11:30 - 12:00	Workshop Summation	Collier

IMPROVING SUBSTATE GOVERNMENT PRODUCTIVITY THROUGH TECHNOLOGY

OBJECTIVE

TO FURNISH LOCAL ELECTED OFFICIALS, PUBLIC ADMINISTRATORS AND CITIZENS OF SPECIAL INTEREST GROUPS INFORMATION AND ASSISTANCE THAT WILL LEAD TO IMPROVED GOVERNMENT PRODUCTIVITY THROUGH THE APPLICATION OF TECHNOLOGY

SCOPE

- o CONCERNS OF MUNICIPAL AND COUNTY GOVERNMENTS FOR IMPROVED PRODUCTIVITY
- o RELATIONSHIP OF PRODUCTIVITY IN GOVERNMENT TO TECHNOLOGY
- o MAJOR TECHNICAL PROBLEMS IN LOCAL GOVERNMENT PRODUCTIVITY
- o CURRENT MEASUREMENT PRACTICES IN LOCAL GOVERNMENT
- o THE SCOPE AND NATURE OF PUBLIC TECHNOLOGY
- o OPPORTUNITIES FOR IMPROVING PRODUCTIVITY
- o TECHNIQUES FOR SYSTEMATIC TECHNOLOGY "TRANSFER"
- o SOURCES OF TECHNOLOGICAL ASSISTANCE TO LOCAL GOVERNMENTS

SPONSOR

GEORGIA POSTSECONDARY EDUCATION COMMISSION

SOURCE OF FUNDS

TITLE I HIGHER EDUCATION ACT OF 1965

TECHNOLOGY: A SEMANTICS JUNGLE

- THERE IS LITTLE CONSENSUS ABOUT WHAT ARE THE MOST PRECISE AND EFFECTIVE TERMS TO USE

- USUALLY, "TECHNOLOGY" AND "TECHNOLOGIES" REFER TO A WHOLE RANGE OF TECHNICAL INPUTS OTHER THAN RAW MATERIALS AND LABOR THAT GO INTO AN ACTIVITY

TECHNOLOGY AS DEFINED BY WEBSTER

... APPLIED SCIENCE

... A TECHNICAL METHOD OF ACHIEVING A PRACTICAL PURPOSE

... THE TOTALITY OF MEANS EMPLOYED TO PROVIDE OBJECTIVES NECESSARY FOR HUMAN SUSTENANCE AND COMFORT

APPROPRIATE TECHNOLOGY

..... TECHNOLOGY BASED ON MODERN SCIENCE WHICH

IS IN HARMONY WITH ITS ENVIRONMENT

DIMENSIONS OF TECHNOLOGY TRANSFER

	NATIONAL			INTERNATIONAL		
	TECHNOLOGY HOLDERS	TRANSFER AGENTS	RECEIVERS	TECHNOLOGY HOLDERS	TRANSFER AGENTS	RECEIVERS
PUBLIC						
PRIVATE						
THIRD SECTOR						

CHARACTERISTICS OF AMERICAN SOCIETY

HISTORICAL: STRONG BUSINESS

WEAK GOVERNMENT

CURRENT: STRONG BUSINESS

STRONG GOVERNMENT

EMERGING THIRD SECTOR

GOVERNMENTAL FUNCTIONS

- FUNCTIONS THAT CANNOT YIELD A PROFIT (IN THE CAPITALISTIC SENSE)
- FUNCTIONS THAT MUST BE PERFORMED
- FUNCTIONS THAT NEED PUBLIC CONTROL

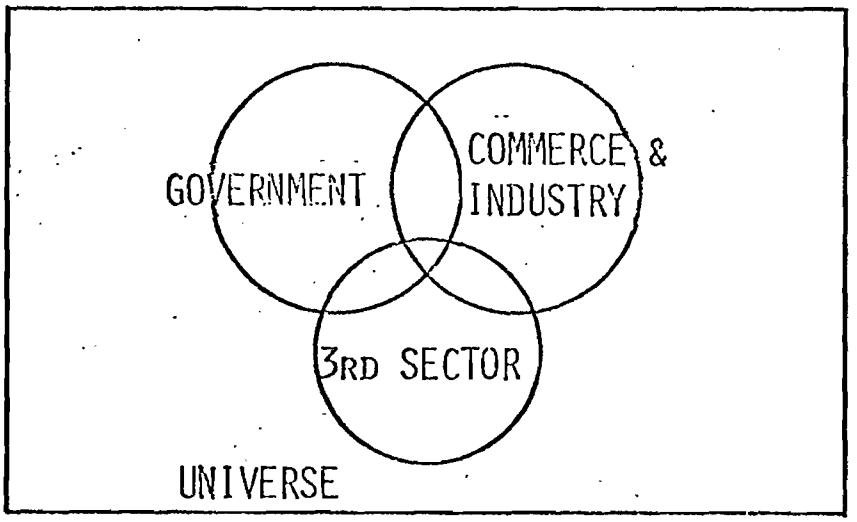
AXIOM

- ALL UNPROFITABLE FUNCTIONS ULTIMATELY BECOME GOVERNMENTAL ACTIVITIES, CONVERSELY
- PROFIT-MAKING OPERATIONS WILL BE MOVED FROM GOVERNMENT TO PRIVATELY OWNED ORGANIZATIONS

THIRD SECTOR ORGANIZATIONS

- o PHILANTHROPIC FOUNDATIONS
- o MUSEUMS, SYMPHONIES, ZOOS, AND OTHER CULTURAL AGENCIES
- o HOSPITALS AND HEALTH ORGANIZATIONS
- o PROFESSIONAL AND TRADE ASSOCIATIONS
- o UNIVERSITIES AND COLLEGES
- o POLITICAL PARTIES
- o SOCIAL CAUSE AGENCIES, INCLUDING FAMILY PLANNING, WELFARE, AND CONSUMER ASSOCIATIONS
- o CHURCHES
- o UNIONS AND FRATERNAL ORGANIZATIONS

TECHNOLOGY TRANSFER UNIVERSE



PRODUCTIVITY ~~OR~~ AND QUALITY OF WORKING LIFE

PRODUCTIVITY GROWTH MEANS

ooo AN INCREASE IN THE RATE OF PRODUCTION OR SERVICES BY A PUBLIC OR PRIVATE AGENCY, ORGANIZATION, ENTERPRISE, OR INDUSTRY WITHOUT A DECREASE IN THE QUALITY OF SUCH GOODS OR SERVICES AND WITHOUT AN INCREASE IN THE COST OF PRODUCING SUCH GOODS OR SERVICES, RESULTING IN A DECREASE IN THE COST PER UNIT PRODUCED

IMPROVED QUALITY OF WORKING LIFE MEANS

ooo IMPROVEMENTS AND ADVANCEMENTS IN THE OPPORTUNITY AND RIGHT OF EVERY AMERICAN WORKER TO ENJOY ECONOMIC, PHYSICAL, SOCIAL, AND PSYCHOLOGICAL WELL-BEING WHICH MAY RESULT FROM CHANGES IN STRUCTURE AND CONDITIONS OF WORK AND WORK ORGANIZATIONS

PROPOSED NATIONAL POLICY

"IT SHALL BE THE CONTINUING POLICY OF THE FEDERAL GOVERNMENT, DRAWING TO THE MAXIMUM FEASIBLE EXTENT ON THE RESOURCES OF THE PRIVATE SECTOR AND OF STATE AND LOCAL GOVERNMENTS, TO STIMULATE A CONSISTENTLY HIGH RATE OF PRODUCTIVITY GROWTH AND SUSTAINED IMPROVEMENT IN THE QUALITY OF WORKING LIFE IN ALL SECTORS OF THE ECONOMY."

TECHNOLOGY TRANSFER PRINCIPLE

TECHNOLOGY "TRANSFER" IS MUCH MORE COMPLEX THAN THE MERE TRANSPORTING OF AN IDEA SOLUTION OR PIECE OF HARDWARE FROM ONE PLACE TO ANOTHER. TECHNOLOGY CANNOT BE FORCE FED; THE DEMAND FOR IT MUST BE CREATED AND NURTURED. ONCE THIS BASIC PRINCIPLE IS ACCEPTED, TECHNOLOGY TRANSFER IN THE PUBLIC SECTOR FALLS INTO PLACE AND SOME CRITERIA FOR PROGRAM DEVELOPMENT AND IMPLEMENTATION EMERGE, SUCH AS:

- MUCH TECHNOLOGY NOW EXISTS: THE PROBLEM IS HOW TO APPLY IT.
- IN ORDER TO CREATE AND ADAPT INSTITUTIONS TO APPLY TECHNOLOGY, POLITICAL LEADERSHIP MUST BE CONVINCED THAT TECHNOLOGY WILL SERVE THEIR POLITICAL NEEDS
- TECHNOLOGY MUST ADDRESS THE NEEDS OF POPULATIONS.
- THESE NEEDS MUST BE COMMUNICATED TO THE RESEARCH AND DEVELOPMENT COMMUNITY AT THE STATE AND LOCAL LEVEL THROUGH POLITICIANS AND THE RESEARCH AND DEVELOPMENT COMMUNITY SHOULD TRY TO SENSITIZE ITSELF TO THESE NEEDS.
- ELECTED OFFICIALS AND POLITICAL ADMINISTRATORS SHOULD BE GIVEN TRAINING PROGRAMS WHICH DEMONSTRATE HOW TO USE RESEARCH AND DEVELOPMENT IN WAYS WHICH WILL MAXIMIZE POLITICAL BENEFITS AND MINIMIZE POLITICAL COSTS AND RISKS.

POSSIBLE APDC ROLES IN TECHNOLOGY APPLICATIONS

- o CATALYIST
- o ADVISOR
- o PARTICIPANT

WORK PROGRAM

- o PHASE 1 - ONE-DAY ORIENTATION WITH PARTICIPATING APDC's
  - ONE-DAY PRELIMINARY CONFERENCE WITH COMMUNITY PARTICIPANTS AT FOUR LOCATIONS
  - ONE-DAY ORIENTATION AND REVIEW CONFERENCE WITH ADVISORY COMMITTEE
  - TWENTY DAYS INITIAL PREPARATION OF PROGRAM

- o PHASE 2 - TWO-DAY INSTRUCTIONAL CONFERENCE FOR APDC PERSONNEL AT CENTRAL LOCATION
  - CONDUCT THREE-HOUR SEMINAR IN FOUR LOCATIONS FOR LOCAL PARTICIPANTS (ONE SEMINAR IN EACH APDC)
  - CONDUCT FOUR-HOUR FOLLOW-UP CONFERENCES FOR SELECTED LOCAL PERSONNEL IN EACH APDC

- o PHASE 3 - PROVIDE 20 MAN-DAYS OF TECHNICAL ASSISTANCE (5 MAN-DAYS/APDC) ON REQUEST TO APDC's AND LOCAL GOVERNMENTS SUBSEQUENT TO THE CONDUCT OF WORKSHOPS AND CONFERENCES. THIS TECHNICAL ASSISTANCE IS TO BE INSTRUCTIONAL IN NATURE AND RELATE TO MANAGEMENT AND ENGINEERING MATTERS COVERED IN SCHEDULED SEMINARS AND WORKSHOPS

- o CONTINUING - CONDUCT QUARTERLY CONFERENCE WITH ADVISORY COMMITTEE AND COMMUNITY REPRESENTATIVES

IMPROVING SUBSTATE GOVERNMENT PRODUCTIVITY THROUGH TECHNOLOGY

A TRAINING PROGRAM CONDUCTED UNDER THE AUSPICES OF

THE GEORGIA PRODUCTIVITY CENTER

APRIL 28, 1976

CONDUCTED BY

Economic Development Laboratory
Engineering Experiment Station
GEORGIA INSTITUTE OF TECHNOLOGY

IN COOPERATION WITH

HEART OF GEORGIA AREA PLANNING AND DEVELOPMENT COMMISSION

SPONSORED BY

GEORGIA POST SECONDARY EDUCATION COMMISSION: STATE AGENCY
UNIVERSITY OF GEORGIA CENTER FOR CONTINUING EDUCATION: ADMINISTRATIVE UNIT
TITLE I, HIGHER EDUCATION ACT OF 1965

AGENDA

TECHNICAL ASSISTANCE NEEDS

BARRIERS TO THE USE OF TECHNOLOGY

SOURCES OF TECHNICAL ASSISTANCE

METHODS OF FURNISHING TECHNICAL ASSISTANCE

SOME TECHNOLOGY APPLICATIONS IN LOCAL GOVERNMENT

ENERGY ISSUES AND THEIR IMPACT ON LOCAL GOVERNMENT

PUTTING IT ALL TOGETHER

QUESTIONS AND ANSWERS

RESOURCE PERSONS

Mr. Robert E. Collier, Head, Education and Training Branch,
Economic Development Laboratory, Engineering Experiment Station

Mr. Philip D. Koos, Jr., Head, Housing Resources Center,
Economic Development Laboratory, Engineering Experiment Station

Mr. Robert B. Kutas, Head, Public Sector Program,
Productivity/Technology Applications Laboratory

The resource persons will be abailable to meet with the seminar participants at the conclusion of the program.

Solving the Problems of Local Governments

J. L. Mercer
and A. H. Markham

More than two dozen engineers and scientists are spending the next three years on the staffs of 27 city and county governments across the United States. These "technology agents" are today's urban counterparts of the county agents who played such an important role in modernizing American agriculture.

The technology agents are part of the Urban Technology System (UTS), a nationwide experimental program sponsored by the National Science Foundation. The program's purpose is to evaluate the influence of several important factors in overcoming local barriers to the utilization of technology.

The program, which began officially in early 1973, affords a number of research and development organizations an opportunity to make contributions in the field of urban research, development, and engineering. Among them are several institutional members of the American Society for Engineering Education.

The Urban Technology System program is being conducted by Public Technology, Inc. (PTI), a three-year-old, non-profit R&D organization formed by a group of state and local government public interest groups, including the Council of State Governments, the International City Management Association, the National Association of Counties, the National Governors' Conference, the National League of Cities, and the U.S. Conference of Mayors.

Each technology agent reports directly to the chief administrative officer in his assigned local government and explores solutions to a wide range of local problems. Particular topics will differ among the specific sites but they are expected to include improved methods for the collection and disposal of solid waste, exploration of alternative fuels for municipal vehicles, development of computerized financial management systems, among others.

Identifying Appropriate Tasks

The initial activity of the technology agent has been to identify local problems that appear to be amenable to technological solution. In addition to his own experience and ingenuity, the agent will be able to obtain problem solving assistance from a major research and development organization. The UTS program provides for the establishment of formal ties between each of the 27 local governments and one of more than 15 major research and development organizations which are participating in the program.

Initial support for UTS is provided in part by a $4.3 million contract with the National Science Foundation.* The contract is part of the Foundation's Experimental Research and Development Incentives Program, which seeks experimentally to test various mechanisms for stimulating the application of technology to improve economic growth and productivity, and to promote practical solutions to urban problems. Contributions from the 27 local governments and the participating research and development organizations bring the total program funding to approximately $10 million.

Since UTS is an experimental program, the 27 participating local governments were randomly selected by computer as representative of full-service, medium-sized cities and counties throughout the United States. Three primary factors were used in selecting the local governments or test sites, to participate in UTS. These were:

- *Geographic location.* Six are in the Northeast and seven each in the Midwest, South, and West.
- *Population.* Nine are selected from each of three population ranges: 50,000 to 100,000; 100,000 to 250,000; and 250,000 to 500,000.
- *Local economic activity,* as evidenced by federal revenue sharing payments; nine each in the top, middle and lower third, on a per capita basis.

The selection criteria provide a basis for evaluating the influence of location, size and level of economic activity on technological innovation in urban communities. The participating test cities and counties are listed in table 1.

*PTI, under its contract with NSF, planned and developed the UTS program and is now responsible for its management and operation. Founded with the aid of a grant from the Ford Foundation, PTI now relies for funding on fees from the more than 115 local governments that are subscribing to its services, as well as foundation and federal grants and contracts.

Another group of 27 cities and counties with the same mix of characteristics were also randomly selected. They serve as experimental control sites which will not receive the UTS treatment of a technology agent and an R&D backup network. Various measurements will be made both in test and control sites to determine whether the UTS treatment was effective in improving the innovative climate.

Matching Needs to Abilities

The technology agents were selected through a nationwide recruiting campaign during which applications from about two thousand engineers, scientists and systems analysts were received and processed. Several rounds of interviews were held to match individual capabilities to the needs of each local government. Each local government selected its agent from a group of three to five candidates. Candidates were required to have a college degree in science, engineering or computer systems. Most of the selected agents have advanced degrees in science, engineering, business administration or public administration, and more than five years of practical experience.

The agent receives a salary equivalent to that paid an assistant city (or county) manager in the respective cities and counties. During the first two years, most of his salary will be paid by PTI. During the third year, he will normally move to the local government payroll, although PTI will continue to pay 20 percent of his salary to permit him to work on matters relating to the continuing conduct of the UTS program.

The research and development organizations that are to provide technical support to the agents were also carefully selected in accordance with the needs of the UTS program. Each of these organizations was required to have a staff of one hundred professionals, skills in a breadth of scientific and engineering disciplines, an environment conducive to innovation, and an established interest in urban problems.

Variety of Primary Assistance

There is no *a priori* reason that one type of research and development organization should be the best for serving the technological needs of an urban area. Since the program is experimental, this has been made another factor, or independent variable, to be tested. One third of the test sites have universities as primary R&D backup organizations, one third industrial organizations, and one third non-profit or not-for-profit R&D centers or federal laboratories. Table 2 lists the participating R&D organizations. The Nashville Urban Observatory listed is a consortium of the following: University of Tennessee, Vanderbilt University, Tennessee State University, Fisk University, George Peabody College, and Meharry Medical College.

PTI's emphasis within the UTS program is to identify those problems that local jurisdictions find most pressing and to seek out the best and most economical technology available to solve them. The Urban Technology System became operational when the technology agents began work in the 27 test sites on July 1, 1974. Since that time there have been many cases of successful transfer of technology into UTS cities and counties via the technology agents. The cases of technology transfer will eventually fall into three categories:

1) *A technology is already in use in some cities and counties, but is unknown to others.* Communication among the technology agents has

(Continued on page 754)

Table 1. Urban Technology System Test Cities and Counties

East-Northeastern Region	*Midwestern Region*
Hampton, Virginia	Akron, Ohio
Henrico County, Virginia	Evanston, Illinois
Jersey City, New Jersey	Independence, Missouri
Lower Merion, Pennsylvania	Kettering, Ohio
West Hartford, Connecticut	Minneapolis, Minnesota
Worcester, Massachusetts	Sioux City, Iowa
	Topeka, Kansas
Southern Region	*Western Region*
Arlington, Texas	Eugene, Oregon
Atlanta, Georgia	Oklahoma City, Oklahoma
High Point, North Carolina	Pasadena, California
Jefferson Parish, Louisiana	Pueblo, Colorado
Little Rock, Arkansas	San Jose, California
Nashville—Davidson County, Tennessee	Spokane, Washington
St. Petersburg, Florida	Tucson, Arizona

Table 2. Urban Technology System Participating Research and Development Organizations

Universities

Metropolitan Nashville Urban Observatory
North Carolina State University
Texas A&M University
University of California at Berkeley
University of Oklahoma
Worcester Polytechnic Institute

R&D Centers

Aerospace Corporation
Battelle Columbus Laboratories
Battelle Northwest Laboratories
Illinois Institute of Technology Research Institute
Naval Underwater Systems Center

Private Corporations

Bolt, Beranek & Newman, Inc.
Exxon Research and Engineering Company
Garrett AiResearch Manufacturing Division
Grumman Aerospace Corporation
Gulf + Western Advanced Development and Engineering Center

In addition to the frequent demonstrations mentioned above, we make extensive use of the AEC Film Library for a more vivid demonstration of industrial and medical applications, weapons effects, and reactor operation than we can give in a normal classroom lecture. The use of films, demonstrations and other visual aids is particularly helpful in getting the point across to students with limited technical backgrounds. When possible, field trips are arranged to nearby laboratories. At the University of New Mexico students are encouraged to schedule time outside of class to operate the UNM AGN-201M Reactor, and field trips to Sandia and Los Alamos Scientific Laboratories are arranged. At Notre Dame a trip to American Electric Power's Donald C. Cook Nuclear Power Station, now under construction, is scheduled. At the University of Missouri a trip is made to Commonwealth Edison, General Electric and government nuclear facilities near Chicago, in addition to a neighboring power plant, a nuclear research reactor, and a nuclear-medicine facility.

Nuclear Energy Texts

There are at least three suitable textbooks available, *Radiation and Life*,[5] written by a biophysicist, *Nuclear Energy—Its Physics and Its Social Challenge*,[6] written by a scientist with an activist bent, and *Sourcebook on Atomic Energy*,[7] which is somewhat more complex and more quantitative, but which lacks an extensive discussion of nuclear weapons and their effects. We have used each of the books as the basic text with about equal success. Several pamphlets from the AEC Understanding the Atom Series have expanded the coverage of some applications such as Plowshare[8] and Controlled Fusion.[9] The pamphlets are generally clearly written at a level appropriate for the course. "Much information with a minimum of technical language," was a typical student reaction. One of the authors has prepared a text [10] to cover material introduced in the first third of the course.

The inclusion of a course such as "Applications of Nuclear Energy" is a valuable addition to the science electives available to students in the humanities. It has been our experience that enrollments in the course have increased with time as non-engineering students become aware of the course and become convinced that it is aimed at their level of understanding. ▲

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(Continued from page 749)

speeded the diffusion of such technology among the test sites in a number of cases, both hardware (e.g., TV camera for detecting sewer line leaks) and software (e.g., project control system).

2) *A technology exists that requires some adaptation or additional engineering to bring it to a form useful in meeting urban needs.* A prime example of this is an infrared viewer which has been reengineered by Hughes Aircraft Company into a hot spot locator for fire and police departments and is now in use or on order by several UTS cities and counties. Another example is a material which shows promise as a superior pot hole patch. UTS is setting up an experimental test in its 27 cities to evaluate it and get data for further development.

3) *No readily available technological solution exists.* There are a number of priority needs fairly common to urban jurisdictions in this category. The UTS program is designed to achieve some longer range results by initiating within the backup network some R&D relevant to this category of problem.

During the three-year operational phase of the experiment, a lot of data will be gathered and analyzed. An independent agency will probably be selected to evaluate data on this and other NSF experiments. The objective will be to make Federal policy recommendations on the best ways to stimulate the adoption and diffusion of technological innovation in the urban part of the public sector. ▲

Further information about UTS or PTI may be obtained by addressing inquiries to either author at Public Technology, Inc., 1140 Connecticut Avenue, N.W., Washington, D.C. 20036.

J. L. Mercer is program director, and A. H. Markham regional manager of the Urban Technology System.